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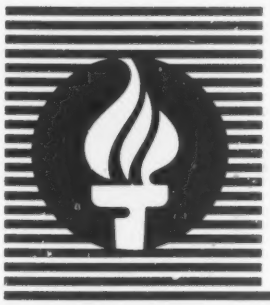

The Conference Board

Measuring Business-Unit Performance

Managements

- *link evaluations to performance of other companies, industry groups*
- *watch both financial, nonfinancial indicators*

Surveyed Executives Believe

- *measurements have significant effect on results* **but**
- *can overemphasize the short-term*

Research Bulletin No. 206

Sources of Information

Two sources provided information for this project. The principal one was a questionnaire mailed to the chief financial executives of 400 firms. These companies were chosen from the Fortune 1000 industrial companies and a list of 50 companies in service industries, based on the likelihood that the companies would be organized along divisional, subsidiary, or other business-unit lines. A total of 85 usable survey responses were received, and most of them included lengthy comments and explanations. Telephone interviews with some executives clarified points in the written responses.

Before the survey was mailed, a discussion group was formed to advise The Conference Board on this project. This group consisted of accounting executives from five large, divisionalized companies, a partner from a major accounting firm, and the research director of one of the professional accounting societies. In a meeting with members of The Conference Board's staff, the members of the group helped identify major problems in measuring divisional performance and supplied insights into company practices.

The Conference Board is grateful to the 92 executives who participated in this project for their time, the wealth of knowledge, and experience that they contributed.

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Measuring Business-Unit Performance

by Francis J. Walsh, Jr.

Introduction

The merger and acquisition wave of recent years has drawn attention again to the task of controlling diversified and decentralized business operations. Ever since business enterprises began to move beyond simple one-product or one-location modes of operation, their managements have sought to measure the performance of individual segments.

Major Findings

Efforts to control business units by means of financial measurements go considerably beyond the mere preparation of divisional income statements and balance sheets. Analysis of financial-statement elements, calculation of a variety of rate-of-return indicators, cash-flow analysis, and a number of other measurement techniques are commonly employed in today's decentralized companies.

Despite their widespread use, however, there are no generally accepted standards for calculating most of these indicators. Consequently, senior executives and management accountants custom-tailor selected measurements for their particular companies and circumstances.

Participants in this study repeatedly stressed that no single indicator can be expected to provide a reliable measurement of total performance. Rather, a variety of measurements and trends need to be evaluated together, with the whole exercise moderated by experienced business judgment.[1]

This study identifies the financial performance indicators currently used by a group of leading corporations to assess the performance of operating divisions, or other units, of such companies. (See box on "Sources of Information.") Three types of measurements are most common: (1) income, earnings or profit indicators; (2) rate-of-return indicators; (3) asset and liability management indicators. Within these broad categories, however, lies a variety of individual factors that companies rely on. And each has its advantages and disadvantages, executives report. Financial factors used to administer incentive compensation programs are most likely to be income indicators or rate-of-return measurements. Most companies that participated in the study use nonfinancial measurements as well, with market share, quality, manufacturing productivity, introduction of new products or services, and sales volume growth cited most often.

Criteria are usually established by a senior-management team, with the chief financial officer playing a key role. Other corporate executives and, in many cases, business-unit managements also participate. The performance of other companies and averages in industry groups are the most important considerations in setting standards. Virtually all respondents believe that performance measures have a significant effect on divisional results. A sizable majority of them also worry that focusing on such indicators can overemphasize the short term.

Problems with Management Accounting

Companies have far fewer rules and restrictions to contend with in setting up their internal management accounting systems than they do in their external reporting practices, which are governed by generally accepted accounting principles (GAAP). Consequently, firms vary in how they allocate costs to their business units. Indeed, in his landmark study of divisional performance measurement, David Solomons observed that it was difficult to prevent such an exercise from "turning into a general examination of management accounting."[2] Two decades later, the same problem exists. (See Appendix III for a list of helpful references.)

In part this variation arises from different attitudes concerning precisely what a business unit is responsible for. Some managements believe that every expenditure incurred anywhere in the company ultimately benefits the units that produce and sell products. Therefore, they tend to allocate nearly all costs and expenditures to these units. Even where no real basis exists for assigning certain items, such items may be grouped into a pool that is then allocated to units on an arbitrary basis.

Some companies go to great lengths to make their business units (and their related financial statements) as much like in-

[1] Another point to bear in mind, of course, is that comparisons of absolute dollar measurements over time are valid only when inflation rates are insignificant.

[2] David Solomons, *Divisional Performance: Measurement and Control*. New York: Markus Wiener Publishing, Inc., 2nd Edition, 1985. (Originally published in 1965 by Financial Executives Research Foundation.)

dependent businesses as possible. For example, the chief financial executive of a transportation company describes his firm's efforts as follows:

> "We have attempted to capitalize our divisions or business units at levels of debt and equity appropriate to their particular businesses. A management fee is charged for parent-company expense as a percent of division equity (at the same rate for all units). External debt is assigned to the specific units as much as possible, as if they financed themselves externally. We have done all this so that we might rely more on traditional financial measurements." [The company uses these measurements: Income before taxes, return on equity based on after-tax income, return on assets, and asset turnover.]

Other managements believe that it distorts the results when nearly all items of company-wide expense are allocated to business units. They prefer to measure their units on the basis of only those costs for which each unit is directly responsible. Consequently, allocations and reallocations are minimized. Some companies also lean in this direction to reduce the bickering that inevitably arises whenever allocations are made.

There are also differences in how assets and liabilities are assigned to units. Of course, when a plant, for example, produces for only one unit, there is no problem. The difficulty arises when the same plant supplies products for two or more. "Unscrambling the omelet" is a vexing difficulty, and often arbitrary decisions must be made just to get the job done.

Other management accounting issues that affect business-unit performance measurement include transfer pricing, whether done at cost or market, and charging interest on capital.

While management accounting problems are not within the scope of this study, they should be kept in mind when considering its results. The computation of rate-of-return indicators, for example, is strongly affected by allocation policies and practices. And in general, financial ratios of business units should not be compared unless the allocation practices are also comparable.

Problems with Terminology

Business units can bear any number of labels—such as divisions, departments, subsidiaries, lines of business, profit centers—depending on the tastes and traditions of the corporation. Perhaps the most important factor is whether the unit functions as a separate corporate entity or is an unincorporated segment of a larger organization.

In this study, an unincorporated unit will be called a *division*, while a separate corporate entity controlled by a parent company will be reported as a *subsidiary*. This distinction seems to be generally observed throughout the business community at this time.

In many decentralized companies, the major operating divisions are known as *profit centers*. The following definition outlines the major features of the profit center:

> "The profit center is intended to function much like an independent business. It has four main characteristics:
>
> (1) It has a defined profit objective.
> (2) Its management has authority to make decisions affecting the major determinants of profit.
> (3) Its management is expected to use profit-oriented decision rules.
> (4) Its management is accountable to higher management for the amount of profit generated.
>
> "The result is that the typical profit center is a division selling a limited number of product lines or serving a specific geographic area. It encompasses both the means of providing goods or services and the means of marketing them.
> "Top management is likely to:
>
> (1) Make all the major decisions on financing and capital expenditures,
> (2) Require that divisions conform to overall company policies, and
> (3) Stipulate that each division's activities be coordinated with those of other divisions.
>
> "Although other restrictions are also common, a true profit center should have at least three kinds of authority within the limits established by company policy:
>
> (1) Freedom to choose its customers.
> (2) Freedom to choose the sources of supply for most of the materials and other goods and services it buys.
> (3) Authority to decide how many people to use in pursuing its profit goals and how to use them."[1]

Incorporation of business units as subsidiary companies is especially common in international operations, where local laws usually require incorporation in the host country. But home-country subsidiaries also exist. For example, when an acquisition has income-tax losses to be carried forward, its existence will continue at least until the income-tax benefit is exhausted. Also, when an acquiring corporation does not achieve 100 percent ownership of an acquisition, the acquired corporation will continue to exist as a separate corporate entity.

[1] Gordon Shillinglaw and Philip E. Meyer, *Accounting: A Management Approach*. Homewood, Illinois: Richard D. Irwin, Inc., 8th Edition, 1986, p. 843.

Financial Measurements

The 85 companies participating in this study use a remarkable variety of financial measurements to assess the performance of their business units. Altogether, more than 100 financial indicators were cited, although most are variations on a few basic themes. Only six companies rely on a single measure of performance; the vast majority use anywhere from two to sixteen indicators in their internal reporting systems.

Classification of Financial Indicators

Three broad classes of financial indicators make up the majority of those reported by the surveyed companies. They are:

- *Income*, *earnings*, or *profit* indicators (mentioned 107 times);
- *Rate-of-return* indicators (mentioned 91 times);
- *Asset-* and *liability-management* indicators (mentioned 88 times).

Less frequently reported financial measurements include:

- *Cash-flow* measurements (mentioned 53 times);
- *Volume-of-business* measurements (mentioned 50 times);
- *Cost-* and *expense-control* indicators (mentioned 13 times).

Appendix I presents a detailed analysis of the various classes of financial performance indicators summarized above. As the tables it contains show, usage of various measures is very scattered, even though most are modifications of fairly standard indicators. A substantial number of them appear only once or twice.

Income Measurements

A typical income statement, whether prepared for a corporation or a business unit, discloses several kinds of income—income from operations, income before taxes, etc.—in the step-by-step process of arriving at net income, or "the bottom line," for the period. That figure is also referred to as "earnings" or "profit," especially in casual conversation and for internal management reporting purposes. For the sake of consistency, "income" will be used in this report.

The two most common measures found are either simple (or slightly modified) net income or income from operations. Simple net income does not allow much opportunity for variation because it should—even for internal reporting purposes—be determined pretty much in accordance with generally accepted accounting principles. But income from operations can be defined as an individual company's management see fit. Several surveyed executives explained how this number is derived in their companies:

"Operating income includes:

(1) Provisions for the pro-rata share of the *replacement* cost of productive capacity used;
(2) The current costs of inventory sold; and
(3) A 'capital charge' on net assets employed."

—*Air-Conditioning and Plumbing-Products Manufacturing Executive*

"Operating income includes net revenue less operating expenses, excluding amortization of intangible assets."

—*Television and Radio Broadcasting Network Executive*

"Net operating income [includes] profits before nondepartmental expense (i.e., interest income and expenses, corporate executive expense, gain or loss on sale of properties, etc.) and taxes on income."

—*Printing and Publishing Company Executive*

"Operating profit [is determined] before other income, interest charges and taxes."

—*Electrical Manufacturing Company Executive*

Another variation of net income is *profit contribution*. At a pharmaceutical and consumer-products firm this is defined as "operating income less financial expenses (e.g., bank charges and interest) and exchange gains or losses (resulting from both transactions and translations) plus an assessment approximately equal to the company's percentage of cost of debt (before taxes) which is applied to the monthly receivable and inventory balances."

Rate-of-Return Indicators

Rate-of-return indicators also come in many forms. Rate of return on assets (or assets employed or managed) is widely used. And, as with several of the other popular indicators, companies have developed variations from the simple ratio of income to assets. (See Appendix I, Table 2.) The relative popularity of the rate of return on assets measurement in assessing divisional performance is probably due in part to the fact that management accountants have somewhat less difficulty in assigning assets fairly and accurately to divisions than they do in allocating certain liabilities. This makes return on assets a more acceptable indicator to division managers also.

The surveyed companies display quite a bit of individuality in how they define return on assets. Here are three formulas:

"Return on assets employed [is] net income plus interest expense (net of tax) divided by average of total assets less current liabilities."

—*Diversified Manufacturing Company Executive*

"Operating return on assets employed [is] defined as operating earnings divided by working capital plus net property, plant and equipment."

—Forest and Speciality Products Manufacturer Executive

$$\text{Return on net assets} = \frac{\text{Operating Income}}{\text{Total assets - (Accounts Payable + Accruals)}}$$

—Hotel and Restaurant Chain Executive

Rate of return on capital (or capital employed) also is popular with the surveyed companies. Capital, when used in connection with a business unit, usually refers to the sum of whatever debt can be identified with the unit plus its net worth. Computational approaches include these:

"Return on average capital employed is defined as after-tax divisional profit contribution divided by average capital employed."

—Pharmaceutical and Consumer Products Company Executive

"Return on invested capital, before and after tax, is profit on invested capital (before long-term financing costs) divided by average invested capital."

—Consumer Food Products Company Executive

"Return on capital employed [is] operating income divided by the average of interest-bearing debt, other long-term liabilities, and equity."

—Diversified Retailing and Manufacturing Firm Executive

One company (in the chemicals and consumer-services sectors) distinguishes in its return on capital computations between subsidiaries that are wholly-owned and those in which there are minority interests. As its chief financial officer explains:

"Return on total capital employed [by wholly-owned subsidiaries is] defined as net income (100 percent ownership basis) plus the after-tax cost of interest, divided by total capital employed. Total capital employed is the sum of net fixed assets, net working capital, other assets/liabilities-net, short and long-term debt including FAS # 13 leases, and goodwill.

"Return on company capital employed [is] defined as net income (company's share) plus the after-tax cost of interest on company guaranteed debt divided by company capital employed. Company capital employed equals total capital employed less non-company guaranteed debt less minority interest in net worth."

Rate of return on equity can be a troublesome statistic for management accountants to deal with. When a business unit is organized as a separate corporate entity or a subsidiary, there is no difficulty because the subsidiary has its own balance sheet and its shareholders' equity is readily apparent. However, when the unit is simply a division of a parent company, it is often difficult to allocate corporate assets and liabilities with fairness and accuracy so that a credible "equity" amount can be identified. Consequently, although return on equity is a basic financial analysis tool for measuring corporate performance, many managements feel more comfortable with other rate-of-return computations when assessing divisional performance.

Asset and Liability Management Indicators

The effectiveness with which division executives manage the assets and liabilities entrusted to them is a matter of keen interest to corporate management. In many companies, inventories and receivables are the most important assets under the control of divisional management. Such indicators as turnover (that is, the number of times the average investment in inventories is "sold" in each accounting period) and days' (or weeks' or months') sales invested in such assets provide readings on how divisional management is performing this responsibility. Changes in these measurements from one reporting period to another are of particular interest. Turnover is also an important statistic for measuring efficiency in other areas of asset and liability management. Companies use this indicator in assessing working-capital management, asset management in general, and capital management in general.

Corporate management is also concerned within how well divisions manage productive facilities. In many companies, however, the authority of division managers to commit and spend money for such facilities is limited.[4] One of the pitfalls of measuring the efficiency of divisions' use of production facilities is that it may encourage business-unit management to retain older, lower-cost equipment rather than invest in newer, more costly, but also more efficient facilities. The experience and judgment of corporate executives are needed in such situations to interpret what the divisions' performance indicators really reveal.

Other Indicators

The survey respondents' use of less common financial indicators, including cash flow, revenues, cost and expense control, and coverages is presented in Appendix I, Tables 4-7. Any of these measures can be of overriding importance in certain circumstances— for instance, if cash flow is spotty or inadequate.

"Most Important" Measures

The respondents were asked which indicator they rated *most* important, useful and reliable. But clearly there is no such magic measurement, for there were over twice as many "most important" votes (208) as there were respondents (85). One company listed 10 indicators in answer to the question. Practically no company finds it feasible to rely on a single measure of performance.

But while few companies single out one indicator, the votes overwhelmingly favor rate-of-return and income indicators:

[4] This is a subject that has received close attention in previous Conference Board publications. See, for example, Patrick J. Davey, *Managing Capital Investments*. New York: The Conference Board, Inc., Research Bulletin No. 165, 1984.

Class of Indicators	*Number of Mentions as "Most Important"*
Rate of return	72
Income	60
Cash flow	28
Asset and liability management	21
Volume of business	18
Other	9
Total	208

If "most important" votes are arrayed by specific measurements within these broad classes of indicators, the most popular are:

Specific Indicator	*Number of Mentions*
Income (absolute dollars)	27
Income from operations	21
Cash flow	21
Rate of return on assets	19
Rate of return on investment	15
Rate of return on equity	15
Rate of return on capital	14

Here are some representative comments about preferred indicators:

- The chief financial executive of a building-products manufacturer names "operating profit, net cash flow, return on investment and working investment turnover." And he adds, "These measurement criteria reflect operating performance over both the short and long term, as well as the effectiveness of resource and asset utilization."
- The vice president for financial planning of an energy company bases his selections partly on the effects that certain indicators have on the investment community's perceptions of the company:

> "Operating income measures the unit's contribution to the net income stream reported to the financial community. The operating return on investment ratio relates such income to the reported balance sheet values. Thus, these two measures tell us how the financial community perceives the business."

But management considerations are important, too.

> "On the other hand, cash income, by eliminating the effects of relatively arbitrary accounting matters (e.g., depreciation policy and deferred tax accruals), reflects the unit's contribution to the company's free cash flow. This amount is then related to the *gross* investment, which eliminates the accounting effects."

- The chief financial officer of a transportation products and services company emphasizes the importance of choosing the right kinds of financial indicators for the particular business unit being evaluated. He states:

> "Return on performance assets is particularly useful for our manufacturing businesses, which are in predominantly mature industries. We use average performing assets to approximate closely the corporation's investment in that business.
> "We believe shareholders evaluate the corporation's performance to a large extent by its return on stockholders' equity. Return on performing assets is a reliable measurement of the business unit's efficient use of its assets and is consistent with our return on equity measurement.
> "Return on sales and sales growth are better suited to evaluating service industries, particularly if the service is in a rapidly expanding phase. Service industries are normally not as capital intensive as manufacturing, and their investment is usually insensitive to large changes in volume. Less attention is given to how quickly assets are turned and focused on the return-on-sales measurement. Sales-growth measurements are useful in determining market-share achievement."

Pros and Cons of Selected Indicators

One reason for using a number of indicators is that the various types of measurements tend to emphasize certain phases of business-unit performance at the expense of other important considerations. For example, income indicators can give a lot of information on how the "bottom line" is derived, but they give no indication of how well the unit manages the assets or capital entrusted to it. Rate-of-return measurements are needed to evaluate that.

Some companies are now attempting to measure how each business unit contributes to overall shareholder wealth. Rate-of-return indicators do not serve this purpose because they relate current income to various historical costs, or book value, on the balance sheet. An electrical equipment manufacturer has developed a sophisticated mathematical model that estimates the current market value of each division; the sum of these amounts for all divisions equals the total market value of the corporation.

Rate-of-Return Indicators

Rate-of-return indicators, in general, help to identify business-unit strengths and weaknesses that affect overall company performance; measure the ability to produce above-average earnings; and have more significance over the longer term than income measures.

Return on assets closely approximates an investor's return on equity, while at the same time removing both the leverage element that is inherent in the return-on-equity measurement and the difficulty of calculating a credible equity amount for an unincorporated business.

Return on investment (ROI) is a widely-understood statistic and the data to compute it are readily available.

Return on equity (ROE) is also easy to understand. It relates most closely to a company's externally reported performance, to its standing with investors, and to the corporate goal of maximizing shareholder wealth. ROE reflects long-term performance with the least distortion; facilitates comparisons of business units with stand-alone competitors; and is useful in gauging profitability for capital-asset decisions.

Return on capital is useful in making comparisons among business units within the company as well as with peer firms outside of the company, regardless of the units' size, labor or capital intensiveness; it is fair because divisions are not respon-

sible for the corporate financial structure, only for the capital entrusted to them.

But rate-of-return calculations also come in for criticism because:

- They tend to be distorted because the investment, capital employed, assets, or equity bases to which income is related are governed by historical costs that often have little or no relationship to current values. (This criticism, of course, applies just as well to the corporation as a whole.)
- They tend to be distorted by accounting allocations and estimates and by the inventory transfer-pricing practices on which division financial statements are based.
- They are not very meaningful when applied to units whose businesses are not capital intensive.
- It is often difficult to determine standards by which rates of return in individual divisions can be evaluated.
- Equity is difficult to allocate fairly to unincorporated divisions and is often meaningless in the case of small subsidiary corporations.
- Internal rate-of-return, which is a commonly-used tool in capital investment decision-making, is difficult to use on a company-wide basis.
- For some rate-of-return indicators, such as operating return on assets, it may be difficult or impossible to obtain comparative data for competition.
- In return-on-asset computations, the calculated asset base may not include all of the assets actually used by an individual division. For example, divisions may use corporate facilities and services for which they are not charged.

Income Measurements

Income measurements get the greatest share of attention both internally and externally because of their pertinence to overall corporate profits; are the easiest numbers to calculate and track at lower levels of the organization; reflect management's response to its environment in the short-term; and relate directly to management's goals of increasing growth and profitability, thereby enhancing shareholders' wealth.

Income from operations (compared with net income) more clearly reflects the performance of a business unit in those areas for which unit management is responsible.

Operating income before taxes excludes the effects of extraneous items like extraordinary write-offs or gains and losses on the sale of assets.

Earnings per share not only calls attention to the goal of maximizing shareholders' wealth, but is also commonly reported by rating agencies.

Growth rates of earnings indicate the momentum of a business unit and may also suggest how long present trends might continue.

But income-driven measurements are subject to criticism because they often lack comparability across business-unit lines, especially if units are engaged in drastically different lines of business. Such measurements may not reflect the different risks to which diversified business units are exposed. (This shortcoming is also attributed to earnings per share measurements.)

Net income is subject to distortion by non-operating revenues and expenses, by income-tax allocations, and sometimes by allocations of corporate charges.

The modified measurements of income—income before interest charges and/or income taxes, income from operations—that some companies employ to correct the distortions just mentioned have drawbacks of their own. They may not relate to the investment required in particular lines of business; do not take the cost of capital into consideration; and tend to promote short-term thinking.

Other Indicators

Other financial indicators also have their advantages and disadvantages:

Cash-flow measurements, as noted, are especially significant for companies whose flows are not up-to-snuff. Beyond that, cash flow is favored as an all-encompassing measurement of business performance that also focuses attention on balance-sheet management.

On the other hand, cash-flow measurements lack predictive value and can be distorted by allocations, estimates, and transfer pricing practices. In the early stages of a line of business, cash flows tend to be erratic and often are negative.

Days' sales in accounts receivable not only show how well the company's credit and collection function is performing, but can also give an indication of customer satisfaction. But these figures can be misleading. In a firm that does considerable government contracting, this statistic is affected by percentage-of-completion accounting and by progress payments.

Inventory-management measurements reveal efficiency in manufacturing and provide warnings when the investment in inventories begins to become excessive. Inventory turnover rates are, of course, inapplicable for some companies (such as utilities); for others they can be distorted by unusual events like the sales-incentive programs automobile manufacturers periodically sponsor.

Volume of sales or revenues relates directly to growth and profitability; it also provides the most direct measurement of deliveries to customers.

The growth rate is regarded by some executives as the best long-term measurement of business health.

New orders help to monitor a company's market share. One executive believes that other financial measurements may show improvement automatically if the company's market share is growing.

On the other hand, revenue may not be closely correlated with net income or cash flow.

Return on sales finds favor because declines in this measure may be a warning of reductions in operating profits; it relates closely to long-term goals of growth and profitability. In evaluating service businesses, it is especially useful because the assets in such businesses are usually comparatively small.

Assets employed, asset turnover, and *investment in current assets* may indicate an excess investment in various types of assets.

Current Techniques: A Comparison with Earlier Conference Board Research

In 1984, The Conference Board published "Measuring Business Performance" (Research Bulletin 153), which reported the results of a survey on the use of corporate performance indicators, based primarily on responses from chief executive officers of *Fortune* 1000 industrial companies. Participants were asked to rank the relative importance of the various corporate performance measurements used in decision-making.

Comparison of the two studies illustrates the different approaches to managing business units as compared with managing overall corporate entities. For example, income from operations is very important in evaluating a division but receives no mention at all in assessing the company as a whole. In contrast, debt management receives scant attention at the divisional level, but a great deal at the corporate level.

The results of the earlier ranking appear in the right-hand column of the following tabulation. The left-hand column summarizes the responses of the present survey participants to the question of which business-unit performance indicators are most important.

	Number of Times Mentioned as Most Important	
Rate of return indicators	*Business-Unit (85 respondents)*	*Corporate (101 respondents)*
On assets	19	10
On investment (unspecified)	15	4
On equity	15	46
On capital	14	42
On sales	9	38
Internal rate of return	-	1
Sub total	72	141
Income Indicators		
Income (absolute $)	27	44
Income from operations (absolute $)	21	-
Contribution to corporate results	6	-
Earnings per share (EPS)	3	29
Growth rates of income	3	3
Sub total	60	76
Cash flow	28	2
Asset and liability management indicators		
Inventory management (e.g., turnover rate)	6	6
Days' sales in receivables	4	3
Current ratio	-	5
Assets employed	4	-
Asset turnover rate	4	1
Debt ratios (e.g., debt to equity)	1	26
Other	2	-
Sub total	21	41
Volume of business indicators		
Revenue volume	8	1
Revenue growth rate	6	2
New orders	2	-
International orders	1	-
Market-share growth rate	1	-
Sub total	18	3
Break-even point	-	12
Cost of capital	-	7
Other (mentioned only once or twice each)	9	12
Total mentions	208	294

Discounted cash flow and *internal rate of return* measurements reveal the results of past investment decisions.

Debt ratio is significant because of its effects on debt ratings and financing costs.

Same Measurements for All Units?

Most executives responding report that the same financial measurements are used for all business units in their companies. When different measurements are applied to different units, it is because of dissimilarities in the business in which the units engage or the environments in which they function. Some examples:

- A company in the aerospace industry emphasizes return on investment for its commercial enterprises and return on assets managed for government contracts.
- A food-products company focuses on rate of return measurements for its domestic business, but uses net earnings for its international ones because of their different financial structures and tax rates.
- Two companies in the telecommunications field have both regulated and unregulated subsidiaries. The regulated ones are evaluated according to their return on the rate base, while the more usual rate of return computations are made for unregulated businesses.
- A company with both manufacturing and retail operations evaluates manufacturing divisions according to operating income and return on capital; for its retail operations, the combination is inventory turnover and return on capital.
- The small size of some of their subsidiaries causes two firms to avoid using return on equity as an indicator, because at the outset such companies are provided with only nominal amounts of equity capital. Return on equity is applied to the more substantial subsidiaries, however.

Some companies cannot or do not apply established business indicators to new or "start-up" units. One of the basic difficulties, of course, is the lack of historical data for comparisons. One firm stresses comparisons with *projected* net income and *projected* revenue growth.

Indicators Used for Incentive Compensation Programs

The survey also asked which financial performance indicators were used in the administration of incentive compen-

sation programs for business-unit managers. Nine of the responding executives either have no incentive compensation program or do not use any specific business-unit performance measurements for this purpose. The remaining 76, however, employ anywhere from one to ten different indicators in their incentive compensation evaluations. Some of these firms, of course, operate more than one incentive compensation program.

Again, despite the variety in specific measures (or combination of measures) used, the vast majority of indicators for business-unit compensation fall into two broad classifications:

- *Income* indicators (mentioned 74 times);
- *Rate-of-return* measurements (mentioned 55 times).

Less frequently mentioned are:

Class of Measurement	*Number of Times Mentioned*
Volume-of-business indicators	15
Cash-flow measurements	11
Asset-management indicators	11
Cost- and expense-control indicators	9
Others	9

The tables (in Appendix II) show the specific measurements included in each of these categories.

Some companies that do not employ these financial performance indicators look to external conditions as the basis for granting incentive awards. The chief financial officer of a television and radio broadcasting network, for example, describes his company's approach this way:

> "Incentive compensation awards are not specifically tied to any financial measurement. Short-term incentive compensation is in the form of annual cash bonuses, which are determined based on current-year results compared with original budgets, with substantial consideration given to the actual operating conditions of the marketplace for that year, together with the improvement (or deterioration) in the strength of the operating unit's franchise during that year. Long-term incentive awards are also granted on the same criteria, with greater consideration given to potential future performance and retention of key employees. Such long-term incentive awards are based partly upon the performance of the company's common stock during the life of the award, which of course reflects the collective performance of all the operating units."

Nonfinancial Measurements

All but nine of the companies represented in the survey also employ nonfinancial measurements in their appraisals of business-unit performance. In all, 78 different measurements were identified. These indicators, along with the frequency with which they were mentioned, are listed in Tables 1-4, which classify the measurements according to their orientation—marketing, production, human resources and others. The companies tend to use anywhere from one to eight different indicators. The five most popular are:

- Market share (mentioned 45 times);
- Quality and reliability of products and services (mentioned 30 times);
- Manufacturing productivity (mentioned 26 times);
- Introduction of new products or services (mentioned 17 times);
- Sales-volume growth (mentioned 12 times).

Usefulness

The 76 respondents who employ nonfinancial measurements compare them with financial indicators this way:

More useful than financial	9
Less useful than financial	17
About equally useful	28
Not sure—no response	22
	76

Some of the minority who consider them more useful point out that the nonfinancial indicators measure underlying forces that ultimately affect financial performance. Says the chief financial officer of a chemical manufacturing company:

> "For specific situations, these measures provide more immediate monitoring and control of the important characteristics of a unit at a particular point in time, from which success in the financial measures will follow."

Other executives assert that nonfinancial indicators also have more long-term significance than most financial indicators. As one executive observes: "Market share is the best long-term indicator of the health of a business."

Survey participants who consider nonfinancial indicators less useful argue that many nonfinancial measurements are somewhat fuzzy and lacking in objectivity; they are therefore less reliable. Others believe that enhancement of shareholder wealth is management's principal duty and that financial indicators are consequently of much more significance. An executive of an international petroleum company adds this thought:

> "Although nonfinancial measures are used in the analysis of changes in income levels, income remains the primary measure. Higher sales volumes by themselves do not necessarily translate into higher income if the mix of product sold has shifted to lower margin items."

Table 1: Marketing-Oriented Indicators

	Number of Times Mentioned
Market share	45
New products or services introduced	17
Sales volume growth	12
Sales volume	8
Expansion into new markets	5
Customer satisfaction	5
Number of new customers	4

The following measurements were each mentioned one to three times: market penetration; customer service; sales-force performance (calls); product mix; delivery performance; order backlogs; competitive position; age of products; proprietary position; innovation; price measurements; discounts compared with competition; equivalent marketing units per salesperson.

The following specialized industry measurements were mentioned once each: unit volume-conversion minutes (telephone company); KWH sales (electrical utility); occupancy rate (hotel chain); network grade of service (telecommunications); access minutes of use (telephone company); transactions (rental and leasing company); fleet size (rental and leasing company); carloadings (railroad).

Table 2: Production-Oriented Indicators

	Number of Times Mentioned
Quality and reliability of products and services	30
Manufacturing productivity	26
Production levels	4
Capacity utilization	3

The following measurements were each mentioned one to three times: additions to reserves (oil and gas companies); refinery throughput (petroleum); production rates; costs of quality-improvement programs; economies of scale; technology development; inventory control; drilling success (petroleum); pipeline throughput (gas); product yield (agricultural producer); condition of facilities (hotel chain); track, crossties and ballast laid (railroad); equipment in storage (railroad); equipment repaired (railroad).

Table 3: Human Resources-Oriented Indicators

	Number of Times Mentioned
Employee headcounts	8
Attainment of affirmative action goals	6
Employee development	5
Management development	5
Safety	4

The following measurements were each mentioned one to three times: organization development; employee satisfaction; employee motivation (morale); employee turnover; employee productivity; human-resources enrichment; standard labor hours (hotel chain).

Table 4: Other Nonfinancial Indicators

Business Ethics:

Integrity of management
Adherence to corporate code
Community service
Social responsibility
Attainment of strategic goals
Cooperation with other divisions
Enhancement of MIS system
Successful capital projects
Acquisitions completed
Environmental factors

The participants who consider both types of indicators about equally useful point out that these measurements complement one another and are both important to gain the total picture of a company.

Respondents who did not state a firm opinion on the relative usefulness of financial and nonfinancial indicators nevertheless make considerable use of both. Perhaps their uncertainty is rooted in the difficulty of achieving precise measurements of many nonfinancial indicators. An executive of a telecommunications company cautions:

> "It is very important that these nonfinancial items be defined not as general statements but as specific action items with specific milestone dates; otherwise they are very ineffective."

Incentive Compensation

Forty-three survey participants use nonfinancial measurements in their incentive compensation programs. And, in most cases, the nonfinancial indicators that they regularly include to appraise business-unit performance are the same ones that they use for incentive compensation purposes. A number of the others report that their incentive compensation programs include goals—frequently nonfinancial—that individual business-unit managers are expected to reach for their units: affirmative action or improved product quality, for example.

Standards of Comparison

Standards of comparison for business financial performance are commonly developed in the planning and budgeting process, especially revenue and profit targets that reflect recent performance as well as expectations.

The real question, however, is how these criteria are derived. Among the firms surveyed, the performance of other companies, especially competitors or peers, and the averages for industry groups are the principal considerations in setting standards for divisional financial performance. For example, an executive of a business equipment manufacturing company says:

> "Our business units each set benchmarks for themselves against their best competitors, the leaders in the industry or function. Year-over-year improvements are expected, with the goal of being the industry leader, and keeping all long- and short-term objectives in perspective."

Ten companies have set specific rate-of-return targets. One such company, for example, looks for a rate of return on capital exceeding that of companies in the Standard & Poor's 500 stock index. A public utility company seeks a rate of return equal to that allowed by its state public utility commission.

Other financial benchmarks cited by the respondents are:

- Investors' expectations
- Rates of return offered by alternative investments
- Cost of capital

Changes in Standards

Most of the surveyed companies have made few or no changes during the last few years in the goals and standards they use for measuring business unit financial performance. However, some executives point out that while the standards may not change, the quantities attached to them change frequently in response to developments in economic and business conditions for the company as a whole or for individual divisions. Changing conditions also lead to shifts in emphasis on certain indicators.

Some respondents also state that increased competitiveness in their lines of business, both domestically and internationally, has caused them to "develop a sharper pencil" in evaluating business-unit performance. Not only has this led to more financial indicators in their internal reporting systems, but reporting and reviewing of indicators have become more formal processes in recent years.

Who Establishes Standards

Senior corporate management is ultimately responsible for establishing criteria for evaluating divisional financial performance. In some companies the chief executive officer, alone, does this. Much more often, however, it is a team effort with the chief financial executive playing an important role. Because of the sophisticated planning and financial control systems in many corporate headquarters, it is common for many specialists to get involved in the standard-setting process. The controller (and staff), the budget staff, the planning staff, the acquisitions group, the human-resources staff and corporate economists are all mentioned by various survey cooperators as participants.

Typical of this "top-down" approach to standard setting is the following statement by an executive of a diversified agricultural products company:

> "Return-on-assets guidelines are imposed by the president after being developed in conjunction with the corporate budget function. Competitor financial information is monitored by the corporate economics function."

But not all companies derive their divisional financial performance criteria exclusively from corporate headquarters. Thirty-seven of the survey respondents state that their business-unit managements participate in establishing negotiated standards for assessing performance. The chief financial officer of a pharmaceutical and consumer products company describes his firm's approach:

> "Standard setting, i.e., the plan, is a bottom-up development process based on strategic direction established by corporate management. Throughout the planning process, there is considerable bottom-up/top-down dialogue before the plan is approved."

Because of the importance of financial performance criteria, many of the survey participants also request approval or ratification from their boards of directors of the standards developed by management.

How Results Are Monitored

The firm's internal financial reporting system is the instrument that is almost invariably used to monitor actual results in comparison with established criteria. The large, complex companies that participated in this study usually prepare monthly managerial accounting reports as a matter of routine; financial indicators are typically included. In some firms, however, certain comparisons and analyses are done only on a quarterly or annual basis because some indicators (for example, rates of return) are not considered meaningful for short periods of time.

Monitoring business performance is also accomplished through periodic reviews. The executive vice president of a pharmaceutical products company, for example, describes his firm's practice:

"Regular performance reviews are conducted at all operating levels, from subsidiary to the corporate function, and the results of such reviews are channeled to the Corporate Operating Committee at regularly scheduled meetings. These mechanisms are likewise supported by a formal semiannual written report of the progress against approved goals."

An international chemicals, natural-resources and consumer services company schedules two types of review meetings. Its chief financial officer states:

"Actual performance is closely monitored by all levels of management in the form of:

(i) Monthly operating reports.
(ii) Bimonthly operating review meetings attended by groups and corporate management to discuss current issues facing the businesses and to review year-to-date results.
(iii) Annual business plan review meetings to discuss and review the past year's performance, the next year's budget, and the five-year forecast."

External Sources of Comparative Information

Information about the financial performance of competitors, peer companies, and industry groups is readily available. Much of it consists of published data that are either free or low-cost. A great deal of it, of course, must be analyzed and modified to put it on a basis that is comparable with a firm's data. Some widely-used sources are:

- Trade association and industry statistics
- Annual and quarterly shareholders' reports and 10-Ks
- Dun & Bradstreet, Inc. Key Business Ratios
- Standard & Poors Compustat Services, Inc.
- Fortune "500" and "1,000" statistics
- Forbes statistics
- Business Week statistics
- Robert Morris Associates Annual Statement Studies
- Security analysts' reports and reviews
- Newspaper and magazine articles about other companies.

Influence of Performance Measurements

Do performance measurements have any significant effects on the real success or failure of the entities that are measured? Perhaps even more important, do they encourage too much focus on the short term because of the perceived importance of maximizing the current period's earnings?

Real Effects on Performance

The survey participants overwhelmingly agree that performance measures have significant effects on divisional results. Seventy-four executives hold this view; only two dispute it; and two are not sure. These last two base their views on the relative newness of their firms' performance-measurement systems and thus the lack of conclusive experience.

Executives cite these reasons in supporting the importance of divisional performance measures.

- Division managers' compensation is directly linked to the results shown by performance measurements;
- Overall corporate results, and improvements therein, show the effects of stressing certain performance indicators;
- Performance indicators enable business-unit managers to know what is expected of them and to act in accordance with the priorities established by top management;
- Careful monitoring of performance has led to corporate decisions to divest certain divisions or subsidiaries and to restructuring and redirection.

The chief financial executive of a building products manufacturing company believes strongly in the motivational effects of performance measurements. He concludes:

"Because of the approach used in developing these performance measurements and their integration into the compensation, incentives and performance/promotional systems, they will focus divisional actions, plans and strategies on those factors which lead to attainment of these performance objectives. Division management time and effort is therefore not spent on extraneous issues."

A Negative Consequence: Short-Term Perspective

Yet, sixty-five survey respondents also believe that the short-term, historical emphasis of most financial measurements may encourage short-term thinking on the part of unit managers. Two executives disagree with this view.

The vice president and controller of a consumer electronics manufacturing company endorses strong action by top management to overcome the divisional tendency to emphasize short-term results:

"We recognize that division managers are influenced by selection of performance measurements. One of the challenges of senior corporate officers is to select correct performance measurements, and in this regard we identify longer-term performance elements that are included in the measurements system. For example, as part of the fixed-cost reporting routine we segregate those resources devoted to new product development and product improvement versus standby or readiness-to-serve costs. Management understands that failure to complete programs to improve current operating results is not generally acceptable performance. Similarly, failure to maintain adequate levels of investment in employee training and advertising programs to achieve short-term operating results is discouraged and in some cases not permitted."

An executive of an agricultural products firm adds that top management pressure is augmented in his company by other measures. He states:

> "There can be a tendency to overemphasize the short-term at the expense of the long-term. This company combats such a tendency by presidential 'jaw-boning,' by looking at measures on a cumulative basis, by preparing the business plan for five years in the future, while reporting three years in the past, and by the use of 'action plans' to ensure that certain steps will take place regardless of financial results. The first year of the plan is looked upon as the first step toward achieving a five-year goal."

But by far the most frequently-mentioned means of counteracting the tendency toward short-term thinking is the adroit design of business unit executives' incentive compensation plans. Tying incentives to attainment of long-term and nonfinancial goals in addition to the usual period profit targets is a widely-used strategy among the survey cooperators. One company, a consumer products firm, has an interesting twist to this approach. The vice president and controller concludes:

> "There is the danger managers will go overboard to generate a large bonus one year and to worry about next year when it gets here. We try to combat that by not awarding all the funds generated by the formula and by encouraging steady growth rather than peaks and valleys. We carry over unallocated funds to the next year so employees can be compensated for a job well done when economic conditions may prevent a normal result from occurring."

Appendix I

Table 1: Income Indicators

	Number of Times Mentioned	
Income (absolute $):		
Otherwise unspecified	29	
Before income taxes	12	
Before interest and taxes	1	
Before interest, taxes, and translation gains (losses)	1	
Before finance charges	1	
Before and after corporate overhead and interest	1	45
Income from operations (absolute $):		
Otherwise unspecified	17	
Before income taxes	3	
Before interest and taxes	1	
After taxes	3	24
Profit margin indicators:		
Income as a % of sales	10	
Income from operations as a % of sales	4	
Income before taxes as a % of sales	1	
Profit before claims, investment income and overhead as a % of premiums (insurance subsidiary)	1	16
Contribution to corporate results (net income, EPS)	8	
Earnings per share (of subsidiary companies)	4	
Controllable profits	1	
Profit per unit of product sold before overhead	1	
Selling profit	1	
Growth rates of:		
Net income, profit, or earnings	5	
Earnings per share and dividends (of subsidiaries)	2	7
Total mentions		107

Table 2: Rate of Return Indicators

	Number of Times Mentioned	
Rate of return on assets:		
Otherwise unspecified	15	
On net assets	7	
On average net assets employed	1	
On total operating assets	2	
On performing assets	1	
On controllable assets	1	
On assets, before taxes	1	
On rate base (utility company)	1	29
Rate of return on capital:		
Otherwise unspecified	16	
On invested capital	5	
On invested capital, before taxes	1	22
Rate of return on investment:		
Otherwise unspecified	18	
Operating return on investment	1	
Cash return on investment	1	
Base return on investment	1	21
Rate of return on equity		18
Rate of return earned in comparison with rate allowed by regulatory authority (utility company)		1
Total mentions		91

Table 3: Asset and Liability Management Indicators

	Number of Times Mentioned	
Inventory management indicators:		
Turnover	13	
Days, weeks, or months sales in inventories	9	
Inventory level	1	
Average inventory as a % of sales	1	
Gross profit return on inventory	1	25
Accounts receivable management:		
Days sales outstanding	17	
Turnover	2	19
Facilities management:		
Capital commitments and actual expenditures for facilities	5	
Average investment	2	
Discounted cash flow and internal rate of return evaluation	2	
Percent of construction internally financed	1	
Construction work in process as a percent of plant (utility company)	1	
Ratio of change in gross fixed assets to change in sales	1	
Gross profit per square foot of selling space	1	13
Asset management, in general:		
Asset turnover	9	
Average assets or assets employed	2	
Ratio of sales to assets	1	12
Working capital management:		
Turnover	2	
Current ratio	2	
Working capital (absolute $)	1	
Ratio of change in working capital to change in sales	1	
Current asset investment needed to support volume of business	1	
Average working capital as a percent of sales	1	8
Debt to equity ratio		4
Accounts payable management		
Accounts payable days outstanding or days cost of goods sold in accounts payable	3	
Accounts payable as a % of inventory	1	4
Capital management, in general:		
Net asset base	1	
Average capital employed	1	
Capital turnover	1	3
Total mentions		88

Table 4: Cash Flow Indicators

	Number of Times Mentioned
Cash flow (not otherwise described)	29
Cash flow from operations	9
Internal funds generation	4
Net cash flow	2
Operational cash flow, before financing	2
Cash performance	2
Cash flow before and after corporate overhead and interest	1
Net cash flow as a percent of capital	1
Cash excess or deficit	1
Cash use vs. budget	1
Investment center cash flow	1
Total mentions	53

Table 5: Volume of Business Indicators

	Number of Times Mentioned
Sales or revenue volume	15
Gross margin on sales	12
Growth of current revenue or sales volume	8
Customer orders	3
Backlog of orders	3
Growth of customer sales base	1
International orders	1
Marketing channel contributions	1
Noninterest income (bank hoiding company)	1
Specific industry revenue indicators (e.g., hotel occupancy rates, and gambling casino revenue rates)	1
Total mentions	46

Table 6: Cost and Expense Control Indicators

	Number of Times Mentioned
Ratio of costs and expenses to revenues	5
Level of plant, production and operating expense	2
Level of selling and G&A expenses	2
Operating and maintenance expenditures in comparison with budgets	1
Cost improvements accomplished	1
Ratio of expenses to gross margin	1
Prime cost coverage	1
Total mentions	13

Table 7: Other Indicators

	Number of Times Mentioned	
Coverage indicators:		
Interest coverage, or pretax interest coverage	5	
Debt coverage	1	
Dividend coverage	1	7
The following indicators were mentioned once each:		
Book value per share		
Ratio of market value to book value		
Bond rating		
Allowance for funds used during construction as a percentage of income to common shareholders (utility company)		
Comparative balance sheets		
Effective tax rates		
R&D expenditures		
Employees, rates paid		
Employee compensation as a percent of sales		

Appendix II

Table 1: Income Indicators Used in Incentive Compensation Programs

	Number of Times Mentioned
Net income	16
Net income as a % of sales	1
Net income before taxes	6
Net income before interest and taxes	1
Net income before finance charges	1
Net income before taxes—margin %	1
Net income growth	7
Attainment of net income objectives	1
Net income from operations	15
Net income from operations before taxes	4
Net income from operations after taxes	3
Net income from operations as a % of sales	1
Contribution to corporate results (Earnings, EPS, Operating Profits)	9
Overall company results	3
Operating cash income	1
Profit on sales	1
Gross margin %	2
Margin improvements	1
Total mentions	74

Table 2: Rate of Return Indicators Used in Incentive Compensation Programs

	Number of Times Mentioned
Return on investment	12
Return on capital	10
Return on equity (of subsidiary corporations)	9
Return on assets (or assets employed)	8
Return on net assets	4
Return on sales	3
Return on invested capital	2
Return on investment—operating	1
Return on investment—cash	1
Return on invested capital before taxes	1
Return on performing assets	1
Return on controllable assets	1
Long term return on capital	1
Three year average return on net operating assets	1
Total mentions	55

Table 3: Volume of Business Indicators Used in Incentive Compensation Programs

	Number of Times Mentioned
Sales or revenue volume (in dollars)	5
Growth of current revenue or sales volume	4
New customer accounts	1
Growth of customer sales base	1
Growth of market share	1
Growth of deposits and loans (bank holding co.)	1
Load factor improvements (public utility)	1
Marketing channel contribution	1
Number of times mentioned	15

Table 4: Cash Flow Indicators Used in Incentive Compensation Programs

	Number of Times Mentioned
Cash flow	6
Internal funds generation	2
Net cash flow	1
Net cash flow from operations	1
Operational cash flow	1
Number of times mentioned	11

Table 5: Asset Management Indicators used in Incentive Compensation Programs

	Number of Times Mentioned
Days' sales outstanding in receivables	3
Inventory turnover	2
Days' sales in inventories	1
Working capital turnover	1
Average investment	1
Capital commitments/expenditures	1
Ratio of sales to assets	1
Average assets	1
Number of times mentioned	11

Table 6: Cost and Expense Control Indicators Used in Incentive Compensation Programs

	Number of Times Mentioned
Ratio of operating expenses to revenues	3
Cost improvements accomplished	2
Operating and maintenance expenses in comparison with budgets (utility co.)	1
Plant expenses	1
Expense control (unspecified)	1
Number of times mentioned	8

Table 7: Other Indicators Used in Incentive Compensation Programs

	Number of Times Mentioned
Attainment of individual objectives	5
Nonfinancial considerations	1
Comparisons with other companies	1
Value creation (as measured by the ratio of market value to book value)	1
Other (not specified)	1
Number of times mentioned	9

Appendix III

Additional Readings

Financial ratios and other performance indicators usually receive extensive coverage in the textbooks on finance, investment analysis, and accounting. A few examples are:

James C. Van Horne, *Fundamentals of Financial Management*. Englewood Cliffs, N. J.: Prentice-Hall, Inc., 4th Edition, 1980, Chapter 6, "Financial Analysis."

Glenn A. Welsch, Charles J. Zlatkovich, and Walter J. Harrison, Jr., *Intermediate Accounting*. Homewood, Illinois: Richard D. Irwin, Inc., 6th Edition, 1982, Chapter 21, Part A.

In addition, there are studies of company practices and experiences with financial indicators. Some examples are:

David Solomons, *Divisional Performance: Measurement and Control*. New York: Markus Wiener Publishing, Inc., 2nd Edition, 1985. (Originally published in 1965 by Financial Executives Research Foundation.)

James B. Edwards, *The Use of Performance Measures*. Montvale, N. J.: National Association of Accountants, 1986.

Francis J. Walsh, Jr., *Measuring Business Performance*. New York: The Conference Board, Inc., Research Bulletin No. 153, 1984.

The general principles and problems of divisional financial performance measurement are covered in a number of books in the fields of management accounting and cost accounting. Two examples are:

Gordon Shillinglaw and Philip E. Meyer, *Accounting: A Management Approach*. Homewood, Illinois: Richard D. Irwin, Inc., 8th Edition, 1986, Chapter 22, "Profit Reporting for Control."

Charles T. Horngren, *Cost Accounting: A Managerial Emphasis*. Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 5th Edition, 1982, Chapter 20, "Systems Choice: Division Performance Measurement."

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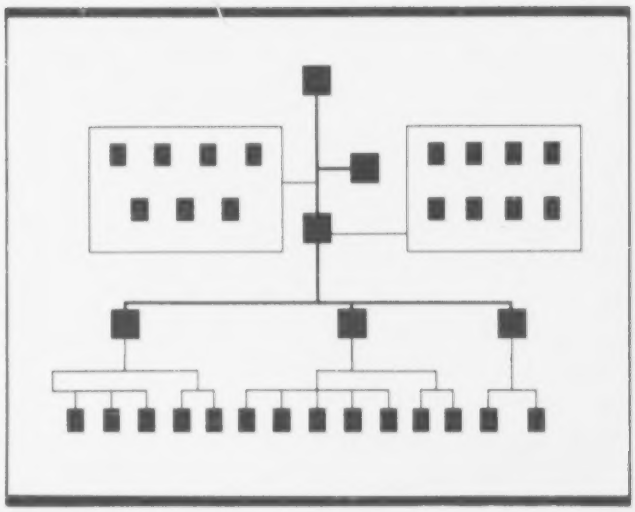

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